

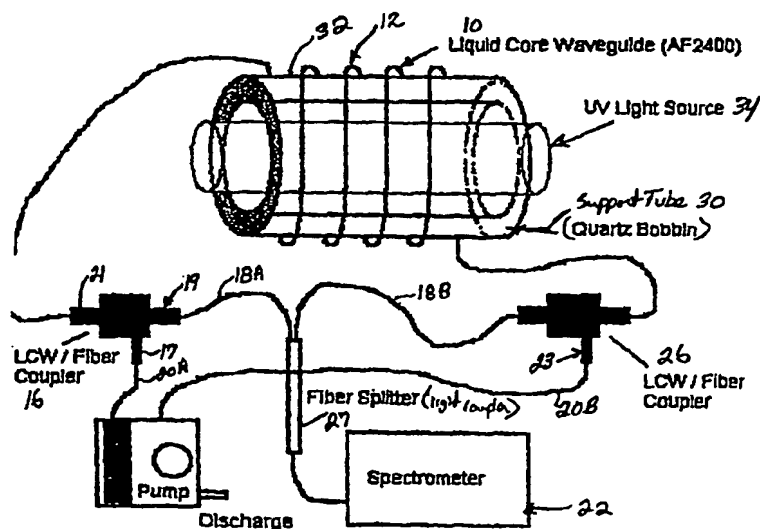
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(71) Applicant (for all designated States except US): UNIVERSITY OF SOUTH FLORIDA [US/US]; 4202 E. Fowler Avenue FAO 126, Tampa, FL 33620-7900 (US).			
(72) Inventors; and			
(75) Inventors/Applicants (for US only): <u>KALTENBACHER</u> , Eric [US/US]; 1945 Pelican Landing Boulevard #616, Clearwater, FL 33762 (US). <u>LANGEBRAKE</u> , Lawrence, C. [US/US]; 12908 Lois Avenue, Seminole, FL 33776 (US). <u>BYRNE</u> , Bob [US/US]; 7472 17th Lane, N.E., St. Petersburg, FL 33702 (US). <u>WATERBURY</u> , Robert [US/US]; 727 House Wren Circle, Pal Harbor, FL 34683 (US).			
(74) Agent: MILLER, John, E.; Calfee, Halter & Griswold LLP, 1400 McDonald Investment Center, 800 Superior Avenue, Cleveland, OH 44114 (US).			

(54) Title: FLUORESCENCE BASED LIQUID CORE WAVEGUIDE



## (57) Abstract

A liquid core waveguide (10) for fluorescence spectroscopy is provided. According to one version of the present invention, a substantially cylindrical support tube (30) is provided, having a substantially constant outer diameter, and a flexible tube (12) is wrapped in contiguous windings about the outer surface of the support tube (30) to form a tight coil about the support tube (30) which is configured of material that is transmissive of light in the relatively short wavelength range which is used to excite the molecular material in the flexible tube (12). This feature enables the flexible tube (12) to be wound tightly about the support tube (30) without crimping (thereby to form the liquid core waveguide into a compact package), and enables light in the relatively short excitation range to be effectively transmitted through the support tube (30) and into the flexible tube (12).